

**REMARKS**

The Office Action mailed February 08, 2006 has been received and reviewed. The application is to be amended as previously set forth. Withdrawn claims 2-5, 8, 10, and 16-20 have been canceled herein. Claims 1, 9, and 11 have been amended herein. All amendments and cancellations are made without prejudice or disclaimer. Claims 11 through 15 stand rejected. No new matter has been added. Reconsideration is respectfully requested.

**Claim Amendments**

Claims 1 and 9 have been amended to preserve the possibility of rejoinder when claim 11 is found to be patentable (*i.e.*, claims 1 and 9 have been amended to depend from the elected base claim 11).

Claim 11 has been amended to specifically reference SEQ ID NO:37. Among other places, support for the amendment to claim 11 may be found in paragraph [0084] of the as-filed Specification.

**Rejections under 35 U.S.C. § 112**

Claims 11-15 stand rejected under 35 U.S.C. § 112, first paragraph. As previously identified, applicant has amended independent claim 11, and partially in view of this amendment, applicant respectfully traverses the rejections as hereinafter set forth.

First, it was thought that the specification and the previous claims lacked sufficient written description of an isolated or recombinant nucleic acid molecule of a *Streptococcus* origin capable of hybridizing to the full length of the recited sequences at the recited conditions. It was further thought that there were no vectors, host cells, or compositions which comprise the isolated or recombinant nucleic acid molecule. It was thought that one skilled in the art would reasonably conclude that the disclosure fails to provide a representative number of species when the previous claims provided no structure to describe the claimed genus.

Furthermore, it was thought that the specification failed to enable an isolated or recombinant nucleic acid molecule of a *Streptococcus* origin as previously claimed because the specification allegedly failed to teach the identity of such sequences. It was further thought that

no teaching existed of isolated or recombinant nucleic acid molecules from *Streptococcus agalactiae*, *S. bovis*, *S. equi*, *S. pneumoniae*, *S. pyogenes*, *S. thermophilus*, or *Viridans Streptococci* hybridizing at recited conditions.

Although applicant does not agree with these assertions and traverses them, in order to expedite prosecution, and as previously stated, claim 11 has been amended to specifically reference SEQ ID NO: 37. Support for this amendment to claim 11 can be found in the Specification on page 37, lines 11-19 (paragraph [0084]).

Because the structure of the isolated or recombinant nucleic acid of claim 11 has been amended to specifically reference SEQ ID NO: 37, the nature and description of a nucleotide sequence capable of hybridizing to the full length of SEQ ID NO: 37 would certainly be clear to a person ordinarily skilled in the art.

As to enablement, in the Specification, SEQ ID NO: 37 was used as a probe to identify (by hybridization) a chromosomal DNA fragment of *S. suis* serotype 2. A 5kb EcoRI fragment was identified and cloned in pGEM7Zf(+) yielding pFBPS7-46 which is depicted in FIG. 1. (Specification, as-filed, page 35, lines 6-10, paragraph [0066]).

The nucleic acid of SEQ ID NO: 37 is not only capable of hybridizing with the nucleic acid of a *S. suis* serotype 2, but also with a large number of *S. suis* strains of other serotypes. Thus, the nucleic acid of claim 11 identifies a candidate for a cross-protective vaccine against various serotypes of *S. suis*.

It was further thought that paragraph [0079] did not teach hybridization occurring under specific conditions. Paragraph [0079], however, is the “results section” of the “material and methods” section of paragraph [0066]. Paragraph [0066] discloses hybridization under specific conditions. Thus, the results in paragraph [0079] do provide a working example for hybridization under specific conditions. More examples are presented in paragraph [0084].

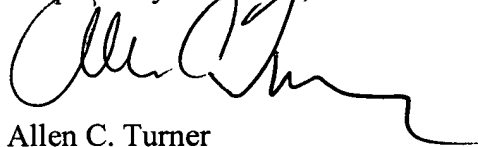
In view of the foregoing, applicant respectfully submits that the application does meet the requirements of 35 U.S.C. § 112, and asks that the rejections be withdrawn.

In view of the amendments and remarks, the application is believed to be in condition for allowance. Rejoinder of the still pending withdrawn claims is specifically requested. If questions remain after consideration of the foregoing, the Office is kindly requested to contact

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applicant's attorney at the address or telephone number given herein.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Allen C. Turner', with a long horizontal flourish extending to the right.

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